

# **Tributary Strategy Revision**

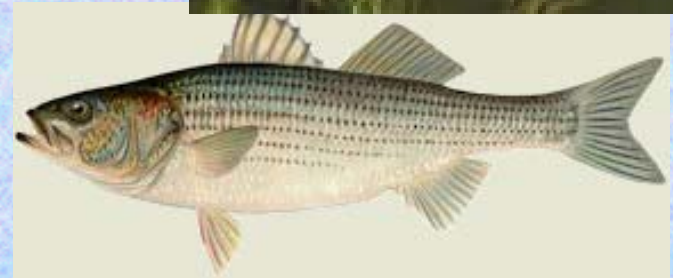
## **Eastern Shore Bayside Watersheds**



**Ernie Brown**  
**Albemarle, Chowan & Coastal Watersheds**  
**Regional Manager**  
**July 29, 2003**

# Purpose of Tributary Strategies

- Restore and protect aquatic habitat for living resources
- Reduce, and “cap” nutrient and sediment loads
- Identify control actions that are practical, cost-effective, and equitable
- Develop stakeholder involvement and commitments



# Basis for Tributary Strategies

- Chesapeake Bay 2000 Agreement
- Actions can't start at water's edge
- Each basin is different
- Each basin affects Chesapeake Bay differently



# Basis for Tributary Strategy Program

- **Chesapeake 2000 Agreement:**
  - Water Quality Restoration and Protection  
*“complete a public process to develop and begin implementation of revised Tributary Strategies to achieve and maintain the assigned loading goals”*

# Basis for Tributary Strategy Program

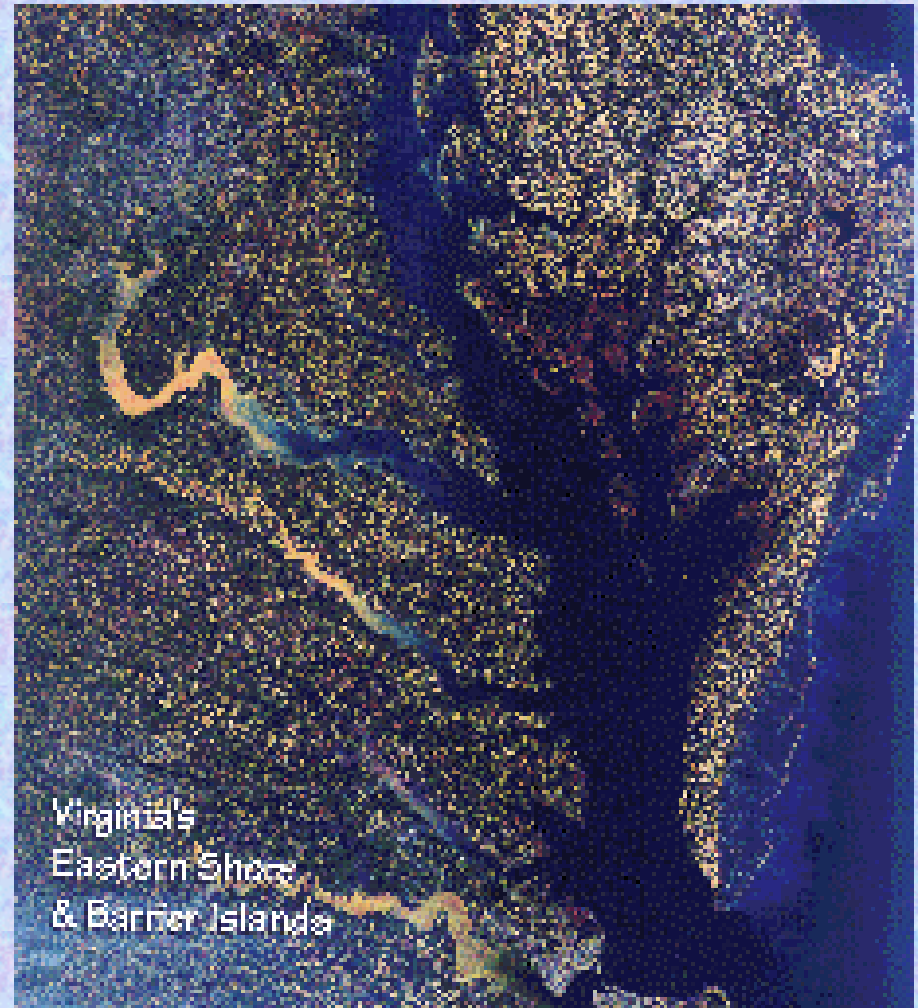
- **State code** (tributary strategies act; Water quality improvement act)

*“The plans shall be developed in consultation with affected stakeholders, including, but not limited to local government officials; Wastewater treatment operators; Seafood industry representatives; Commercial and recreational fishing interests; Developers; Farmers; Local, regional and statewide conservation and environmental interests...”*

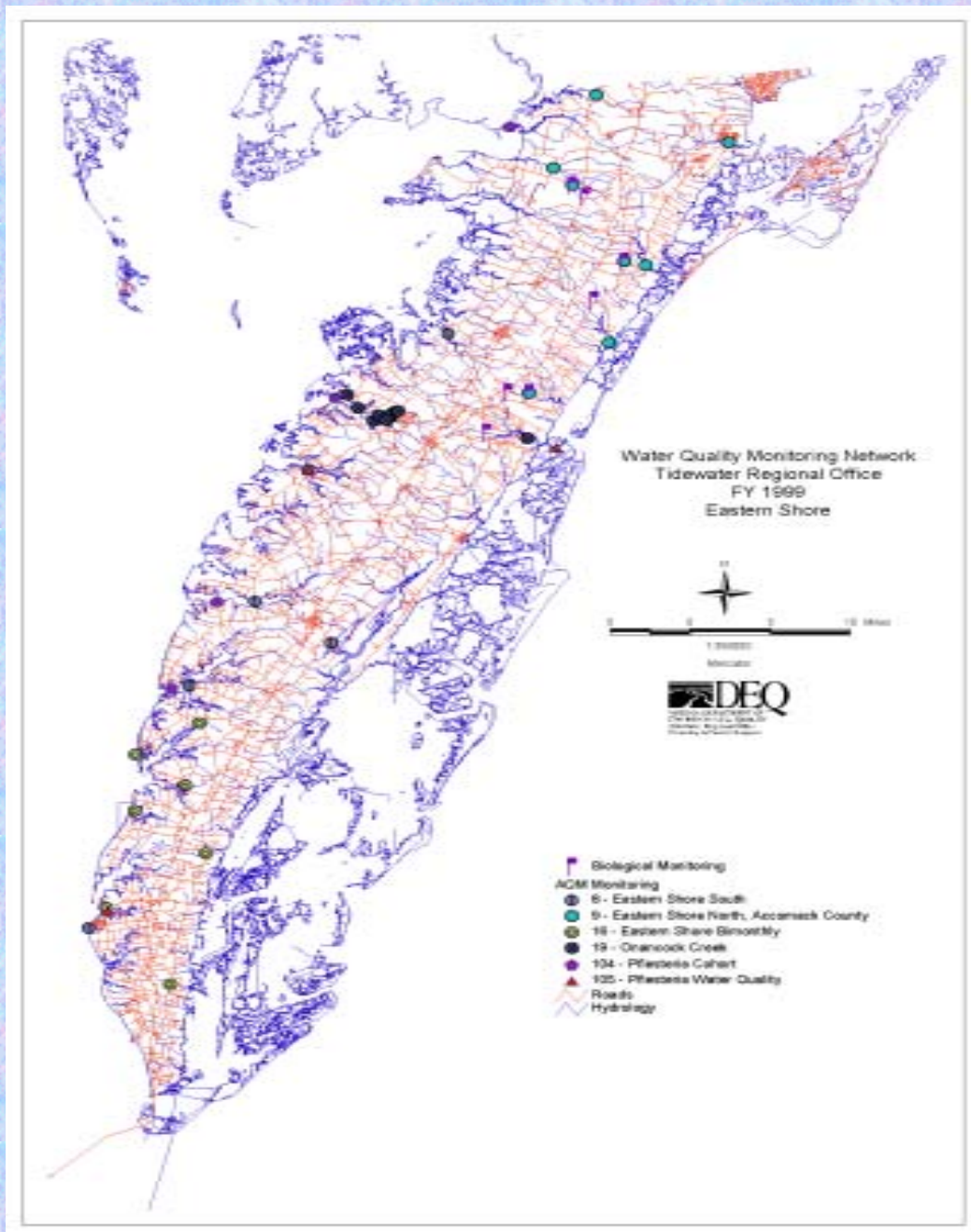


# The Va. Eastern Shore Watershed (a Basin “Snapshot”)

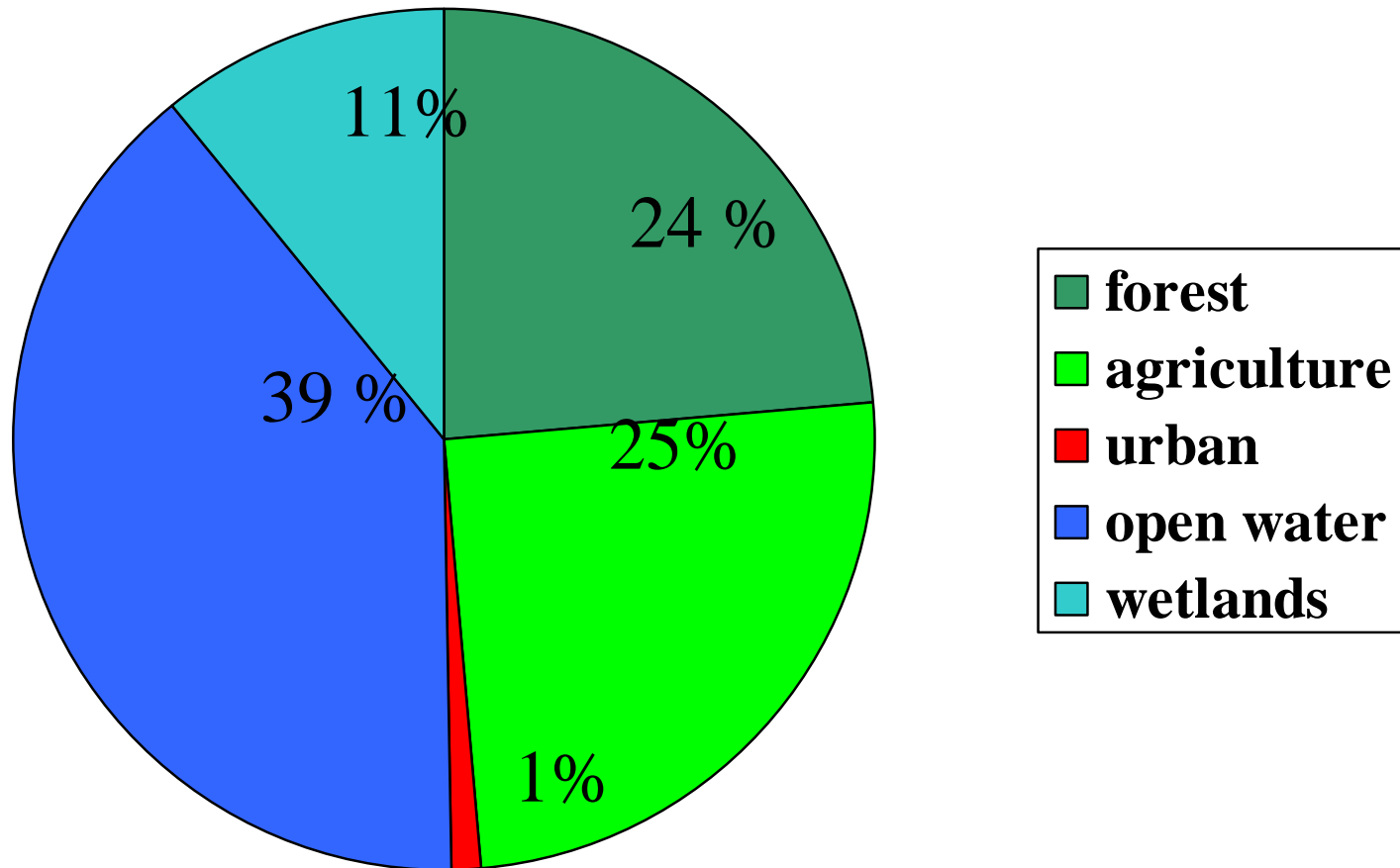
- Length: 80 miles.
- Area: 499 square miles.
- Counties: 2.
- Population: 28,595.
- Tributaries: Pocomoke Sound; Muddy, Taylor and Jacobus creeks; Bethel and Hollies Church branches.



# Eastern Shore Watersheds



# Land Uses in the Eastern Shore Watersheds





# **Original Tributary Strategy Goals**

## **–Living Resources Goal:**

- Increase the areas and density of SAV to historic levels**

## **–Nutrient reductions by 2003:**

- Nitrogen 22.4%;**
- Phosphorus 41.8%.**

## **–Nutrient reductions by 2003:**

- Sediment 31.4%.**

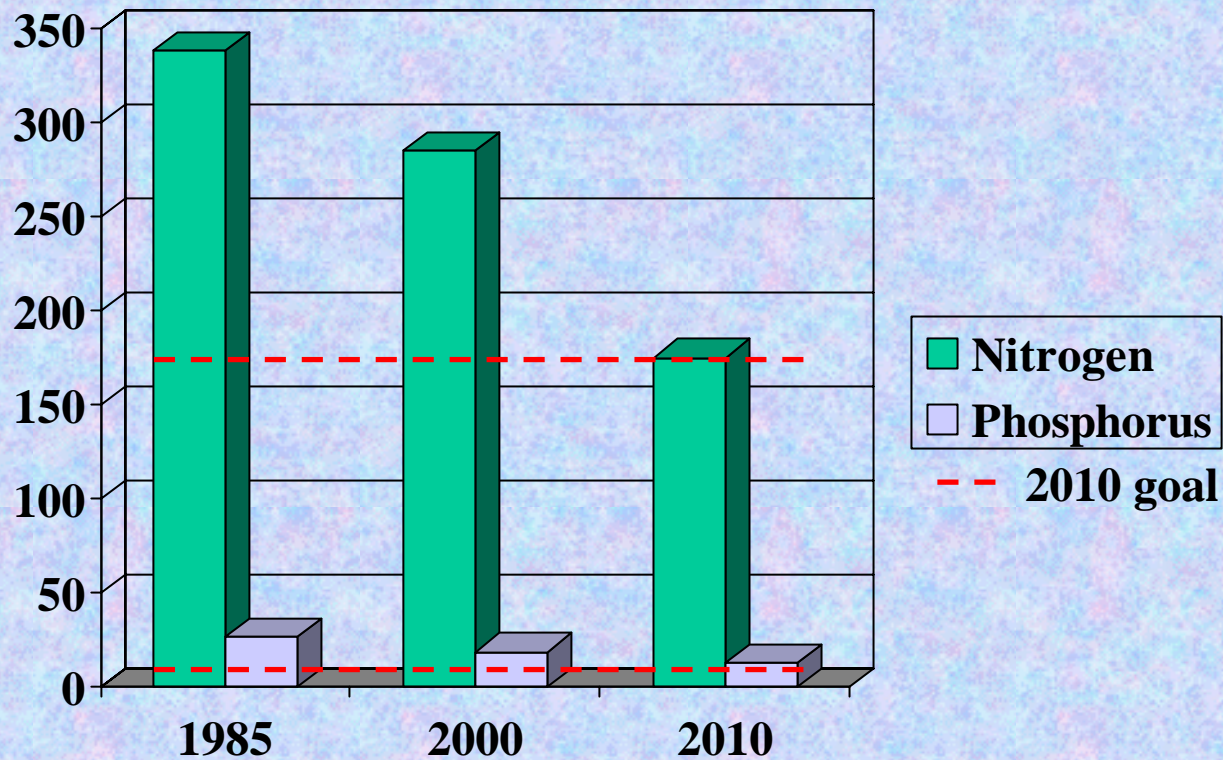
# Nutrient/Sediment Progress



- Nitrogen (M lb/year)
  - 1985 Load: 2.35
  - 2000 Load: 2.12 (-10%)
  - 2010 Cap: 1.2 (-49%)
- Phosphorus (M lb/year)
  - 1985 Load: .22
  - 2000 Load: .21 (-5%)
  - 2010 Cap: .08 (-64%)
- Sediment (M tons/year)
  - 1985 Load: 0.021
  - 2000 Load: 0.018 (-15%)
  - 2010 Cap: 0.009 (-58%)

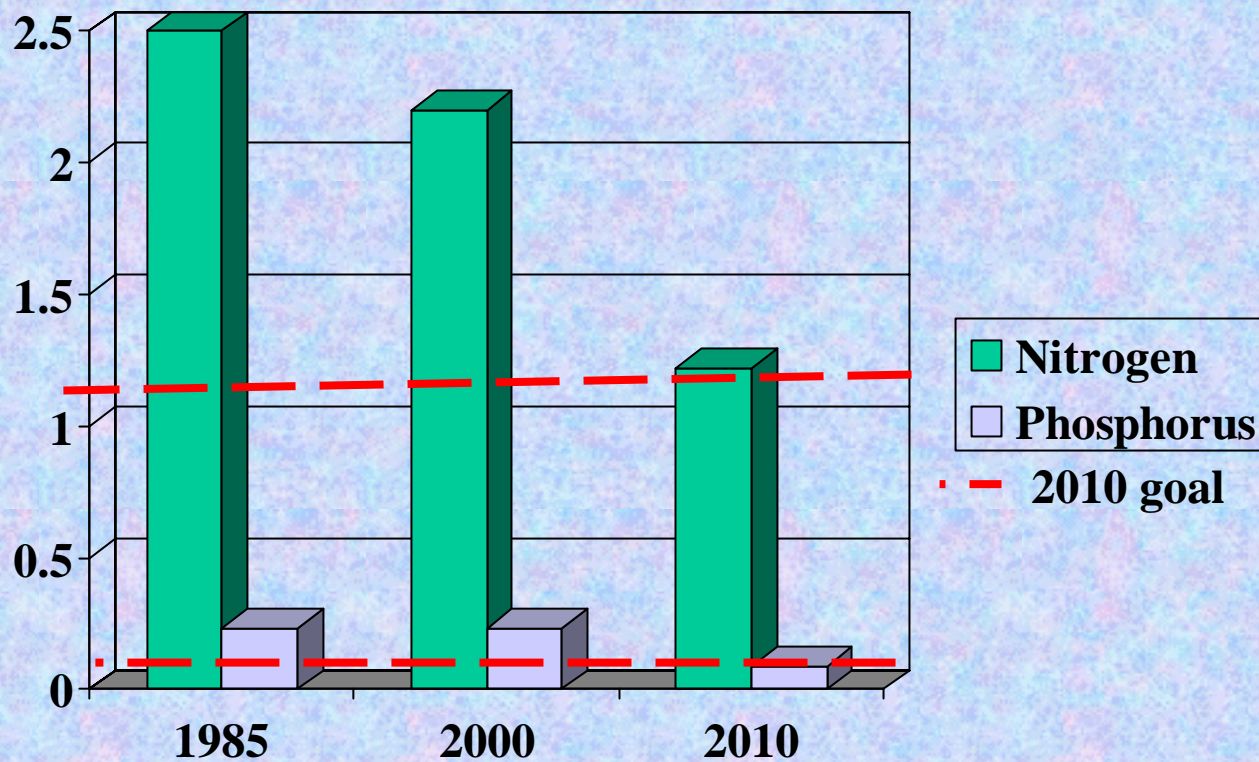


# Baywide N&P Change with 2010 Goal\*



\* *In millions of pounds per year.*

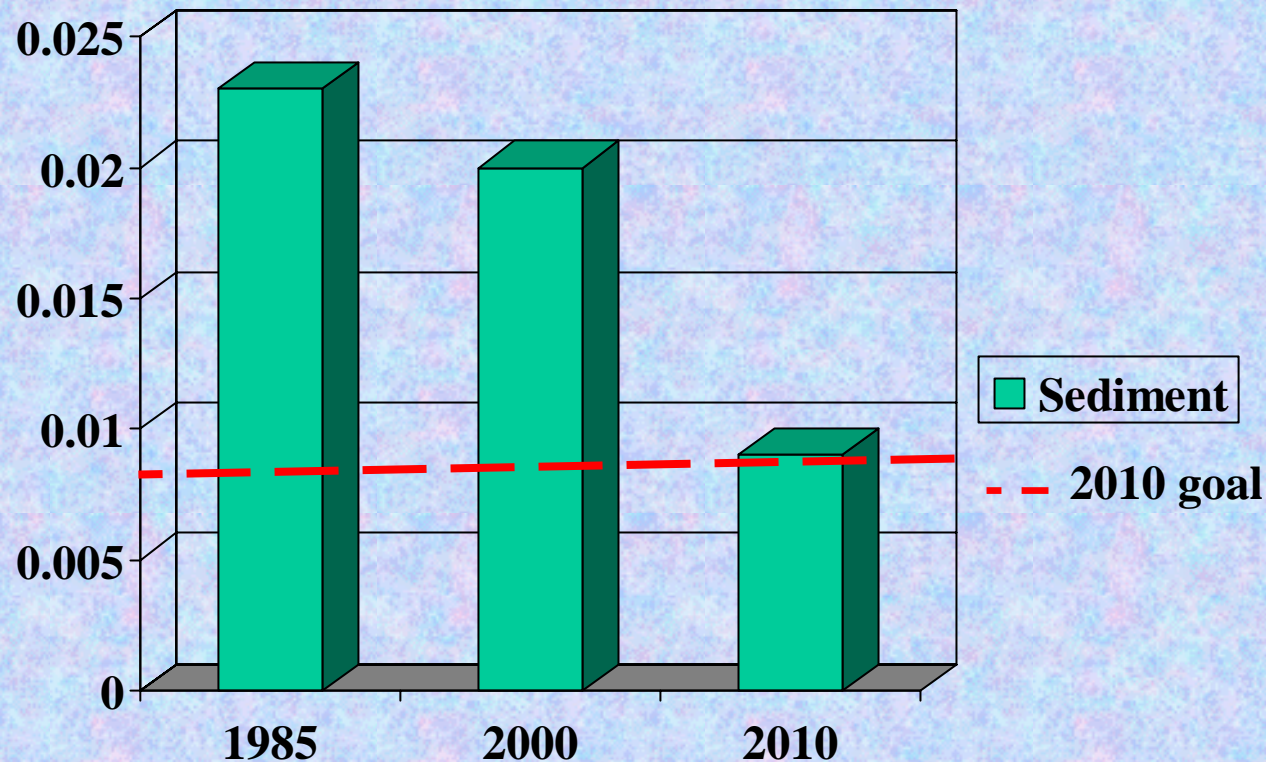
# Eastern Shore Basin N&P Change with 2010 Goal\*



\* *In millions of pounds per year.*

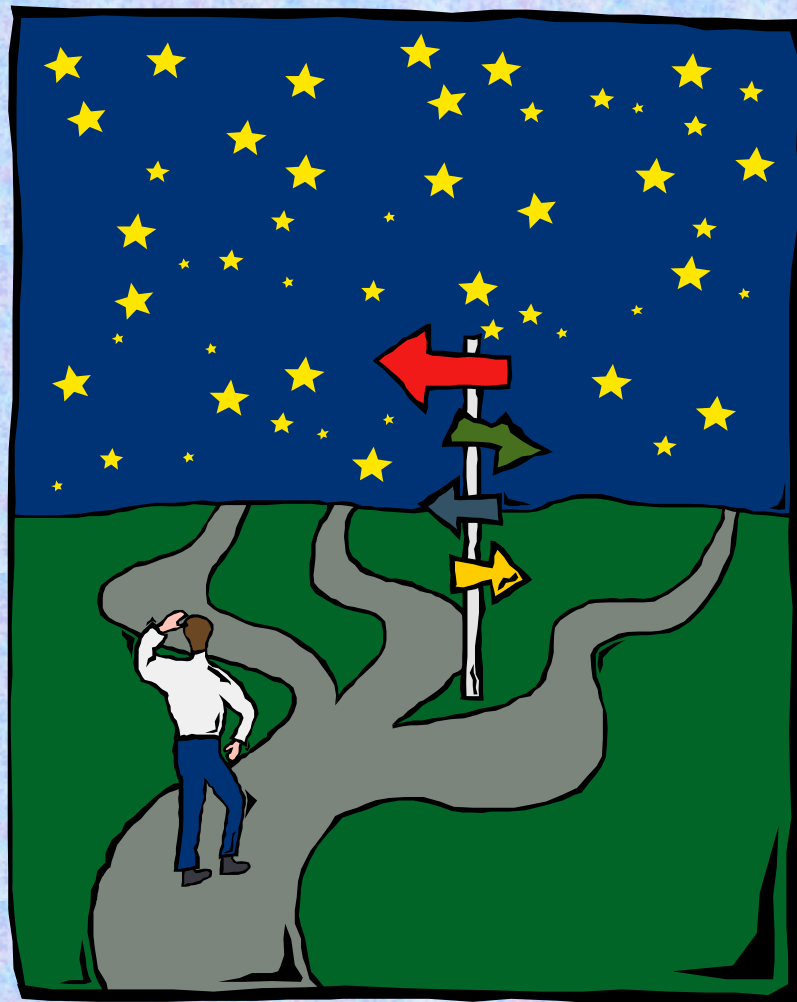


# Eastern Shore Basin Sediment Change with 2010 Goal\*



\* *In tons per year.*

# How Do We Get There From Here?





# ***Tributary Strategy Planning Steps & Timeline***

**First Tributary Strategy  
developed  
*1999***



**New Load Reductions  
Set by USEPA  
*April 2003***



**Launch Tributary  
Strategy Revision  
*July 2003***

**Tributary Teams  
review allocations**

**Meetings  
*Aug-Nov 2003***

**Consensus on  
Scenarios**

**Draft Strategy  
*Fall 2003***

**Public Comment  
Period**

**Revise Strategies  
*Early 2004***

**Tributary  
Strategy  
Approved  
*April 2004***



**Refine Plans  
Locally**



**Implement/Track  
Refined Plans**

# Tributary Strategy Teams With Stakeholder Groups

## Potomac River

Team Leader: Marc Aveni  
Potomac Regional Manager  
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Ph: (540) 347-6420

Shawn Smith  
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Stakeholder Group:  
Potomac Watershed Roundtable

## Rappahannock River

Team Leader: Matt Criblez  
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Stakeholder Group:  
Rappahannock River Basin Commission

## Shenandoah River

Team Leader: Tamara Keeler  
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Stakeholder Group:  
Pure Water 2000

## York River

Team Leader: Matt Criblez  
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Bob Ehrhart  
DEQ, Chesapeake Bay Program  
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Nancy Miller  
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Stakeholder Group:  
York Watershed Council

## Upper James River

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Stakeholder Group:  
Upper James River Conservation Roundtable

## Middle James River

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Stakeholder Group:  
Piedmont James River Roundtable

## Lower James River

Team Leader: Ernie Brown  
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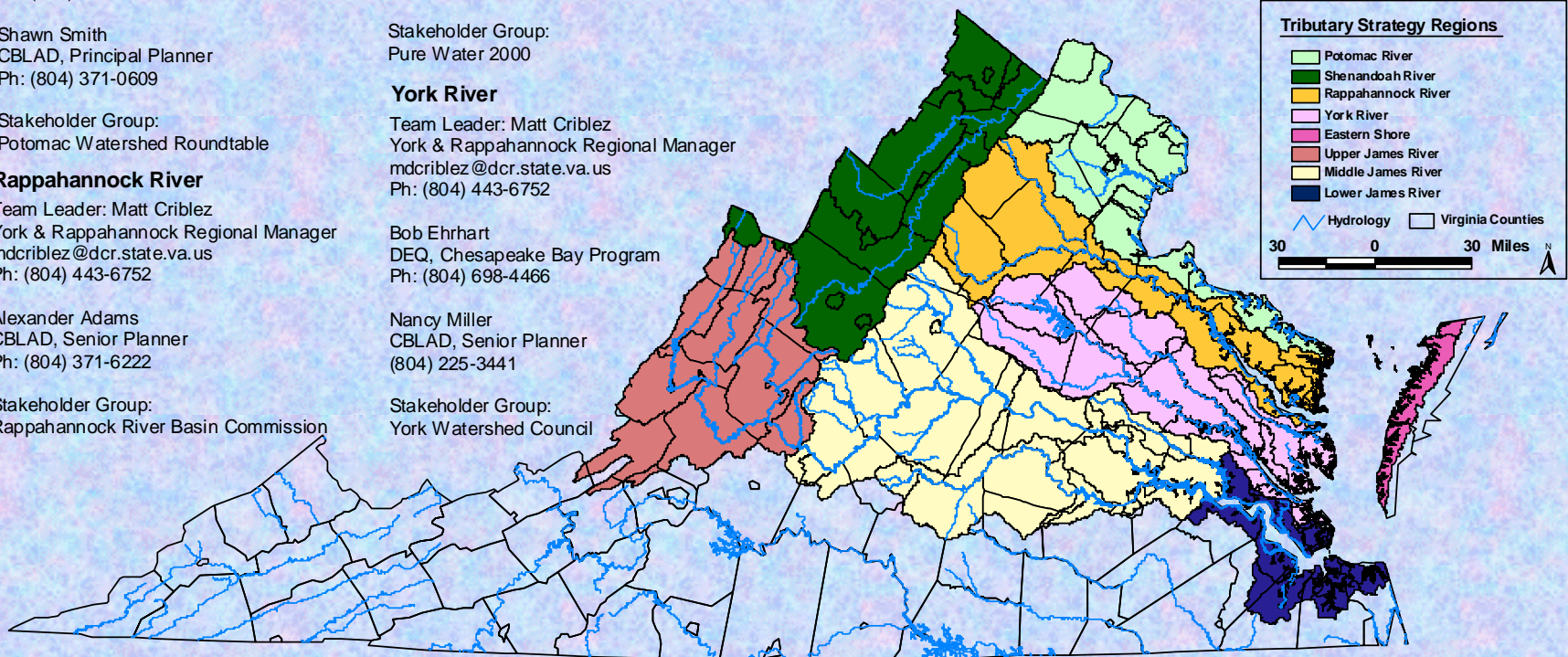
Stakeholder Group:  
Hampton Roads Lower James River Roundtable

## Eastern Shore

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Shawn Smith  
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Stakeholder Group:  
Eastern Shore Watersheds Network



Created by:  
Department of Conservation & Recreation  
James Watershed Office  
3800 Stillman Parkway, Suite 102  
Richmond, Virginia 23233  
Ph: (804) 527-4484

Data Sources:  
EPA Chesapeake Bay Program  
EPA BASINS, Version 3.0

June 2003



# Key Considerations for Revising Tributary Strategies

- Build on existing strategy and network
- Wealth of Chesapeake Bay Program data
- Account for existing accomplishments
- Use the monitoring data collected
- Voluntary, cooperative approach
- Seek common agreement on what needs to be done
- Key principles:
  - Cost-effectiveness -- Feasibility -- Equity

# Eastern Shore Tributary Team

- Use existing structures such as:
  - Eastern Shore Watersheds Network
- Technical assistance and review
  - Local, State, federal agencies
  - Network workgroups



# Stakeholder Involvement

## *" Trib Strategy Teams" :*

- Local governments
- Planning district commissions
- Soil and water conservation districts
- Wastewater treatment facilities
- Conservation organizations
- Business interest groups
- Citizens



# Stakeholder Involvement (cont'd)

- State agencies
- Federal agencies (land management)
- Industry
- Real estate/ Homebuilder associations
- Agro -business
- Watermen
- Marinas





# Process: *Local* Planning

- Basin-specific process
- Local flexibility in meeting goals
- Trib team will help define process & carry out work
- Need to identify and build on past success
  - e.g. ESWN, SWCD, PDC accomplishments
- Continuing refinement of trib strategy to reflect new actions & commitments

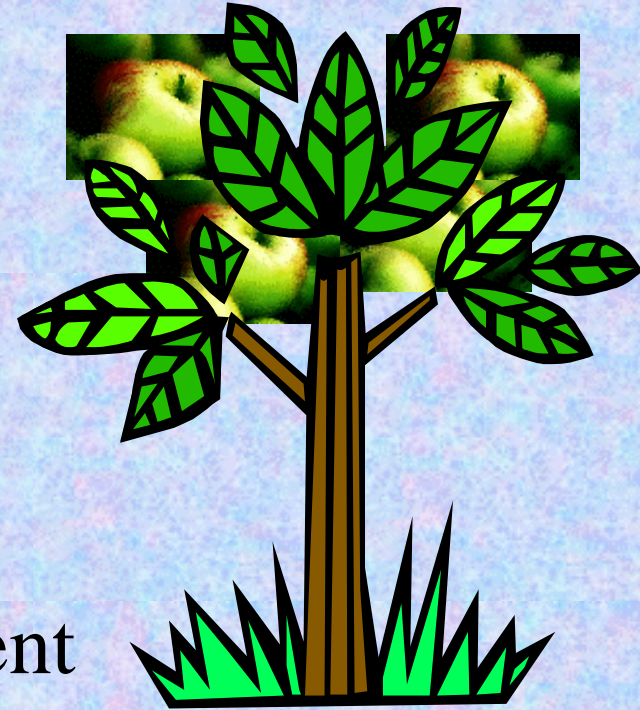
# *Local* Planning

- Expand participation to ultimately include all types of land users
  - e.g. suburban homeowners – urban nutrient management
- Accent on developing very local buy-in
- Prominence of local governments
  - Land Use
  - Comprehensive Planning
- Public comment period



# Where Do We Look for Reductions?

- Agricultural practices
- Waste-water treatment
- Urban/suburban storm water
- Land use, low impact development
- Educating the public



# How Do We Look for Reductions?

- Locally with existing resources
- Locally requiring new resources
- Statewide initiatives

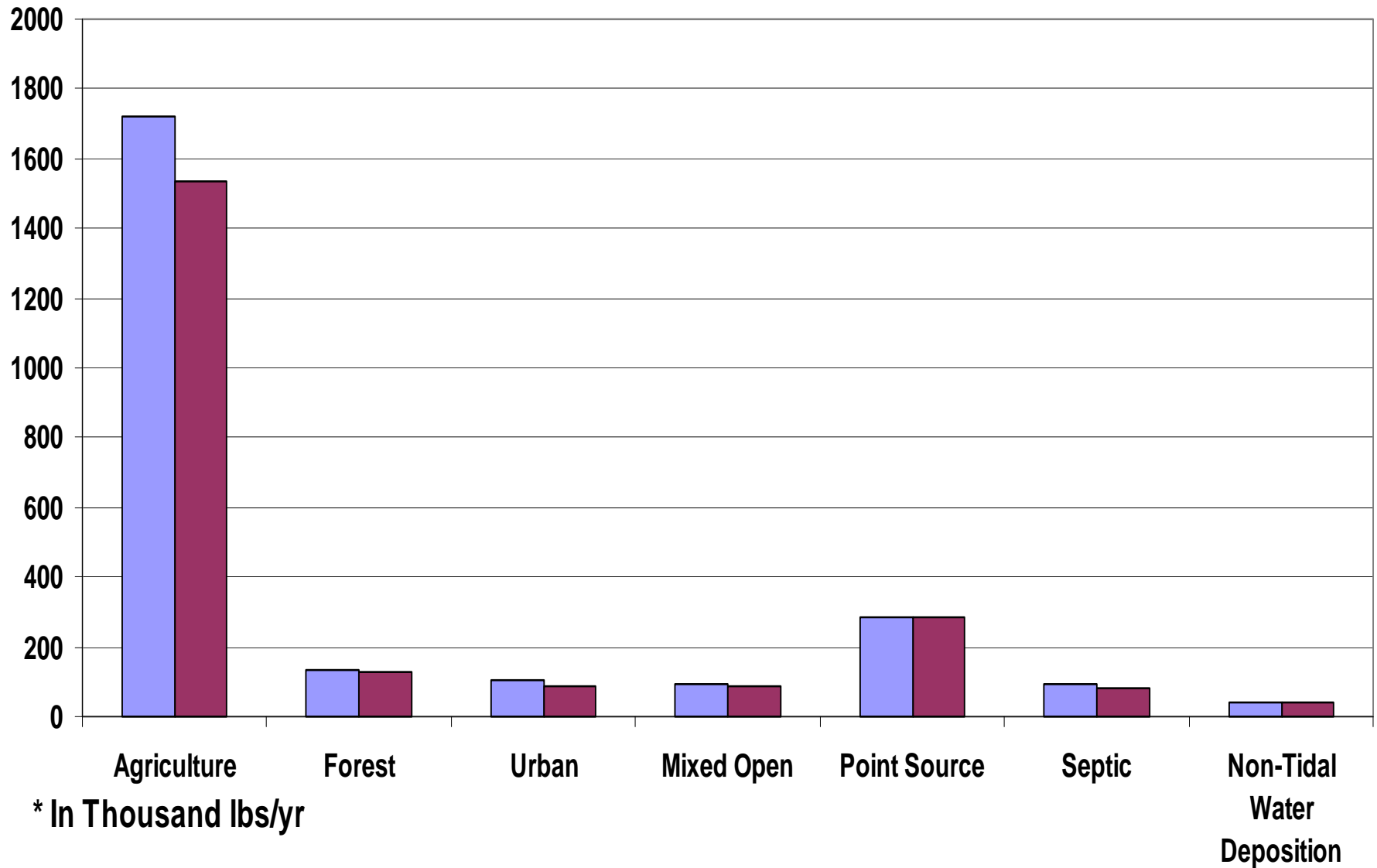


# What Tools Do We Have?

- Extensive BMP information
- Use “scenario builder” to explore options
- Chesapeake Bay Watershed Model
- VIMS monitoring
- Technical expertise of Bay Program
- Loads by source categories

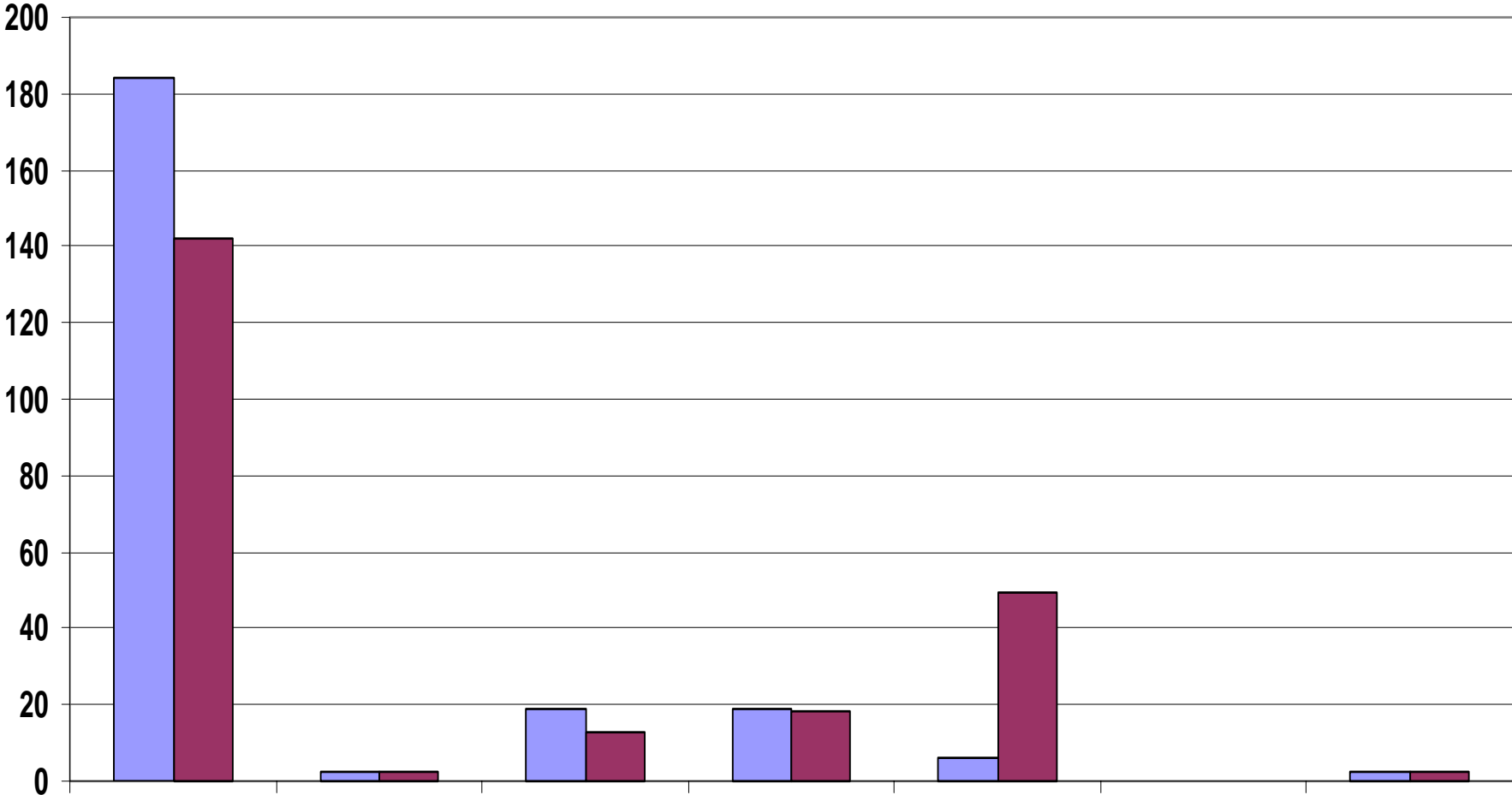
## Eastern Shore Nitrogen Loadings by Source Catagory

1985 2000





Eastern Shore Phosphorus Loadings by Source Catagory

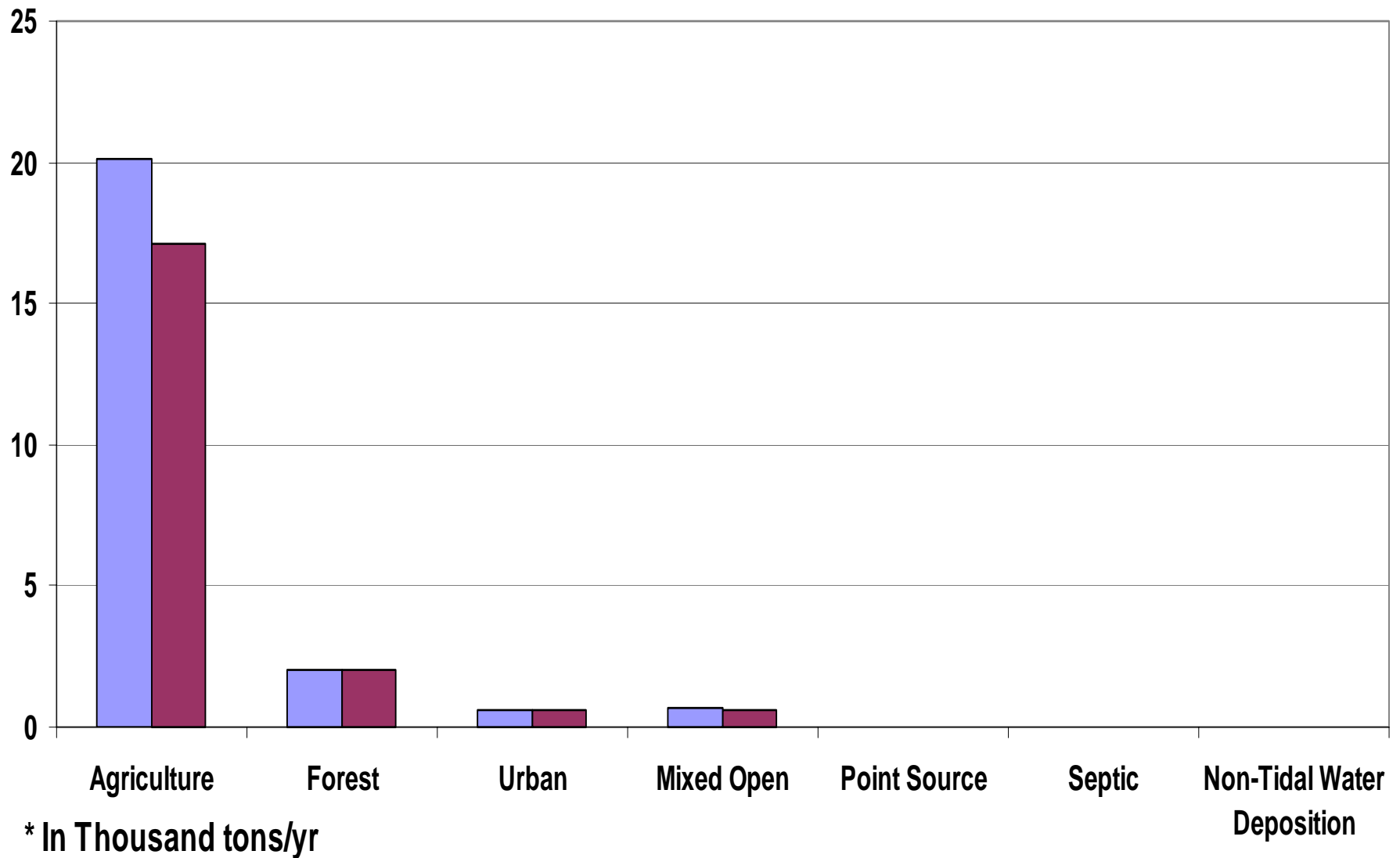


\* In Thousand lbs/yr

Non-Tidal  
Water  
Deposition

## Eastern Shore Sediment Loadings by Source Catagory

1985 2000





# What's Included in the Revised Strategies?

- A “snapshot” of the basin
- Actions to reduce loads to meet goal
- Discussion of funding needs and options
- Tracking method for loads, reductions and cap
- Phased strategy implementation

# What's Included?

- Status/Progress of N, P, sediment reductions
  - Successful reductions thus far
- Specific implementation strategies
  - BMPs – what/where
  - Local government initiatives – e.g. LID
  - Point Source upgrades
  - Watershed Planning



# 2004 - 2010

- Continuing refinement of Tributary Strategy
- Dynamic document
  - Implement existing programs, projects
  - Refine practices, costs, funding
  - Identify and implement new/unique/innovative programs and practices
  - Marketing strategy to engage new array of stakeholders

# What is the Next Step?

- Ensure a diverse, *active* Tributary Team
  - Team members that represent all sectors and areas of the watershed
- Tributary Team meeting – Mid-August
- Need *commitment* by Team members
  - Revisions on *very* aggressive schedule
  - *Much* work to do
- Trib Team to conduct as much work as possible via email, conference calls, etc.
  - Let's use our time to do the work, not travel



# Questions ???

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